

Avimetal-MT170H

Laser Powder Bed Fusion Equipment

Open-Source R&D Printer

Convenient / Safer / Cost-Effective

Ideal for Research & Education



High Cost Performance

High quality and long-term stable operation



Modular and Compact Design

Easy to assemble and maintain



Multi-scraper Adaptable

Rubber, hairbrush, high-speed steel, ceramic, etc.



Powder Feeding Structure

Accurate powder delivery and convenient replacement



Multi-powder Material Compatibility

Preloaded extensive print parameters Customizable & adjustable



Real-time Monitoring

Real-time recording, output, self-diagnosis



Open-source Parameters

Laser power, scanning speed, etc. are open and adjustable



Supports Customization

Provide services based on customer needs



Equipment Parameters

Build Material	Titanium Alloy, Nitinol Alloy, Aluminum Alloy, Superalloy, Cobalt-Chromium Alloy, Stainless Steel, Die Steel, Copper Alloy, High-Entropy Alloy, Refractory Metal, etc.		
Build Size ^①	φ 170×120mm (D×H)		
Laser System	500W×1		
Scanning System	High-Precision Scanning Galanometer		
Focusing System	F-theta Field Lens		
Beam Quality	M ² ≤1.1		
Beam Diameter	40~80μm		
Maximum Scanning Speed	7m/s		
Layer Thickness	20~100μm		
Platform Preheating Temperature	RT+20℃~200℃		
Recoating Mechanism	Unidirectional Variable-Speed Recoating		
Gas Support	Ar/N ₂		
Working Oxygen Content	≤100ppm		
Build Efficiency ^②	25cm ³ /h		
Host Dimensions	1400×800×1800mm (L×W×H)		
Installation Dimensions	3200×2400×2380mm (L×W×H)		
Power Supply	AC220V		
Power Consumption	7kW		
Equipment Weight	Approx.800kg		

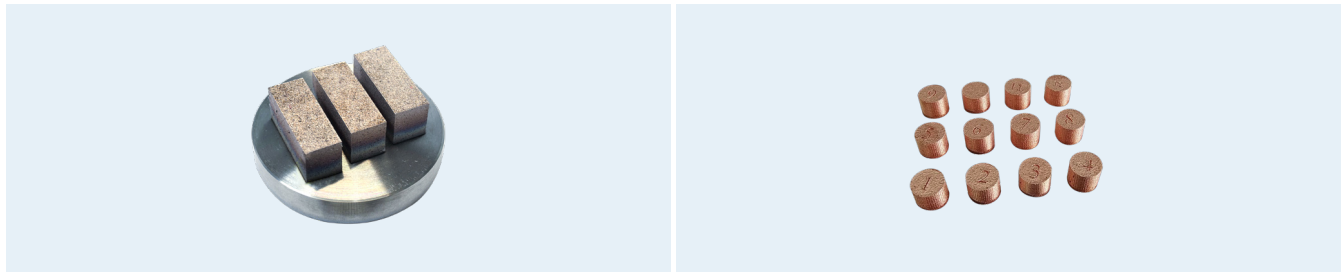
^① Excluding the thickness of the build platform.

^② The building efficiency can vary due to differences in equipment configuration, process parameters, and the operating status of the laser.
* The above data are obtained under AVIMETAL operating conditions. The final equipment parameters are subject to the actually sold products.


Application Areas

	Scientific Research		Education		Small Batch Manufacturing
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Application Cases



Material Test Blocks (Small Cylinder) (MT-CuCrNb)

Material Test Rods (MT-CuCrZr)

Parameter Smart Module

Standard Configuration: AVIMETAL-Pretreatment data preprocessing software, AVIMETAL-Control system (intelligent process diagnosis, real-time data tracking, real-time status monitoring).

Optional Configuration: Permanent dust removal, 3D part reconstruction, powder spreading monitoring, automatic splicing, path planning, AVIMETAL-MES management system.

Consumables

Rubber scraper, metal build plate, filter

Pre-Sales & After-Sales : Multi-location service support, 24x7 rapid response

	Customized Matching Specialized technical team supports deep customization		Assembly & Debugging Standardized installation, rapid optical system calibration		Personnel Training Comprehensive tiered training: operation, process handling, etc.
	Product Upgrades Equipment iteration services including supporting software		Spare Parts Service Provides maintenance parts and consumables		Operational Support On-site equipment inspection and maintenance by engineers

Materials

More than 200 alloy grade powder materials, including superalloys, titanium alloys, aluminum alloys, cobalt chromium alloys, stainless steels, die steels, high entropy alloys, refractory metals, and copper alloys, etc.

Process

Design Modeling → Structured Process → Forming Process → Process Control → Heat Treatment → Surface Treatment → Detection Analysis

